

#### **IV. REMARKS/ARGUMENTS**

##### **A. Amendments to the Claims**

The application still contains 31 claims.

Claims 9, 10 and 15 have been amended in order to correct minor informalities.

Claims 1, 11, 12, 13 and 16 have been amended in order to better define the subject matter being claimed.

No new matter has been added to the present application under the current amendment.

##### **B. Statements of Rejection and Reply**

###### **i) Claim Objections**

On page 2 of the office Action, the Examiner has objected to claims 9 and 10 because they include the typo 'The A'.

The Applicant respectfully submits that claims 9 and 10, as well as claim 15, which also included this typo, have been amended such that the typo has been corrected. These claims now commence with "The method".

In light of the amendments described above, the Examiner is respectfully requested to withdraw his objections to claims 9 and 10.

ii) Rejection of Claims 1-6, 9, 11-12, 16, 19-22, 26 and 29-31 under 35 USC §103

In the Office Action, the Examiner has rejected claims 1-6, 9, 11-12, 16, 19-22, 26 and 29-31 under 35 USC §103(a) as being unpatentable over U.S. Patent 6,167,028 (hereafter referred to as Harris) in view of U.S. Patent 5,644,766 (hereafter referred to as Coy et al.)

Firstly, the Applicant respectfully submits that the combination of references cited by the Examiner fails to establish a *prima facie* case of obviousness on the basis that the two references relate to non-analogous art. In particular, Coy et al. relates to field of storing and migrating data within a storage hierarchy, which the Applicant respectfully submits is non-analogous to the field of processing connection requests in a multi-service gateway. As such, the subject matter in Coy et al. would not have been known to an inventor of the present application.

Moreover, an inventor seeking to solve a problem associated with multi-service gateways should not reasonably be expected to look to the field of data storage, in which the Examiner found Coy et al., to find a solution to his or her problem. As per *In re Oetiker* 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed Cir. 1992) “the combination of elements from non-analogous sources, in a manner that reconstructs the applicant’s invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness.” Accordingly, since the reference cited by the Examiner relates to non-analogous art, the Applicant respectfully submits that as per *In re Oetiker*, this combination of references fails to establish a *prima facie* case of obviousness.

Secondly, the Applicant respectfully submits that even if Harris and Coy et al. did relate to analogous art, which the Applicant respectfully submits they do not, the combination of these references still fails to establish a *prima facie* case of obviousness on the basis that the combination of references cited does not teach

all the limitations of the claims, as required by §2142 of the MPEP. For the reasons presented below, the Applicant respectfully submits that neither the Harris reference nor the Coy et al. reference teach all the limitations of the independent claims.

Claim 1

The Examiner's attention is respectfully directed towards the following limitation of amended claim 1.

A method of processing a request for a connection through a multi-service gateway, comprising:

**allocating processing resources from a resource pool as a function of: a usage level of the pool, a priority level of the connection request and a pool occupancy threshold.**

The Applicant respectfully submits that neither of the references cited by the Examiner disclose the invention of independent claim 1. More specifically, neither Harris nor Coy et al. disclose "allocating processing resources from a resource pool as a function of ...a pool occupancy threshold."

On pages 8-9 of the Office Action, the Examiner concedes that Harris does not disclose a "method of allocating resources from the pool as a function of the pool occupancy threshold". In view of the amendment to claim 1, the Applicant presumes that the Examiner would be willing to concede that Harris also does not disclose "allocating processing resources" as a function of a pool occupancy threshold.

The Applicant further submits that Coy et al. also does not disclose, teach or suggest this limitation. Instead, Coy et al. discloses a system and method for managing a hierarchical storage system through improved data migration. The portion of this reference identified by the Examiner, namely col. 10, lines 38-50, simply describes that when a "minimum occupancy threshold" is reached on an archival media instance, the space occupied by the live objects on that archival

media instance get consolidated on a new media instance. As such, the allocation of resources disclosed by Coy et al. are storage resources. In no way does Coy et al. disclose "allocating processing resources as a function of ... a pool occupancy threshold".

In accordance with §2142 of the MPEP, in order to establish a prima facie case of obviousness, the combination of references cited must teach all the limitations found in the claim. Since neither Harris, nor Coy et al. disclose all the limitations of independent claim 1, the Applicant respectfully submits that the combination of these references, notwithstanding its aforementioned impermissability, is not sufficient to establish a rejection based on obviousness. As such, the Examiner is respectfully requested to withdraw his rejection of claim 1.

Claims 2-6, 9, 11-12, 16 and 19

Claims 2-6, 9, 11-12, 16, and 19 depend from independent claim 1, and as such incorporate by reference all the limitations contained therein, including the limitation of "allocating processing resources from a resource pool as a function of...a pool occupancy threshold", which has been shown to be absent from both Harris and Coy et al.

Accordingly, for the same reasons as those presented above with respect to independent claim 1, the Examiner is respectfully requested to withdraw his rejection of dependent claims 2-6, 9, 11-12, 16, and 19.

Claim 20

The Examiner's attention is respectfully directed towards the following limitation of independent claim 20.

A multi-service gateway, comprising:  
a plurality of packet-switched ports;  
a pool of port processing software entities (PPSEs), each PPSE having sufficient capacity to provide processing for any of the packet-switched ports; and

a resource manager adapted to execute a method comprising receiving connection requests and, if a particular connection request involves at least one of the packet-switched ports, **allocating a subset of the PPSEs in the pool for satisfying the particular connection request, as a function of a priority level of the particular connection request, as a function of a usage level of the pool and as a function of a pool occupancy threshold.**

The Applicant respectfully submits that the references cited by the Examiner do not disclose the invention of independent claim 20.

More specifically, as mentioned above with respect to claim 1, Harris does not disclose the limitation of "allocating processing resources from a pool of resources as a function of ... a pool occupancy threshold". Since Harris does not disclose this limitation, the Applicant respectfully submits that Harris cannot disclose a multi-service gateway having a resource manager for "allocating a subset of the port processing software entities (PPSEs)...as a function of...a pool occupancy threshold".

Furthermore, as mentioned above with respect to independent claim 1, Coy et al. discloses allocating storage resources on the basis of a minimum occupancy threshold. Nowhere does Coy et al. disclose "allocating a subset of PPSE's...as a function of...a pool occupancy threshold".

Since neither Harris, nor Coy et al. disclose all the limitations of independent claim 20, the Applicant respectfully submits that the combination of these references, notwithstanding its aforementioned impermissibility, is not sufficient to establish a rejection based on obviousness. As such, the Examiner is respectfully requested to withdraw his rejection of claim 20.

Claims 21-22, and 26

Claims 21-22, and 26 depend from independent claim 20, and as such incorporate by reference all the limitations contained therein, including the limitation of "allocating a subset of the PPSE's...as a function of...a pool

occupancy threshold”, which has been shown to be absent from both Harris and Coy et al.

Accordingly, for the same reasons as those presented above with respect to independent claim 20, the Examiner is respectfully requested to withdraw his rejection of dependent claims 21-22, and 26.

Claim 29

The Examiner’s attention is respectfully directed towards the following limitation of independent claim 29.

A multi-service gateway, comprising:  
means for receiving a connection request;  
means for determining a usage level of resources in a resource pool in the multi-service gateway; and  
**means for allocating resources from the resource pool to satisfy the connection request if the usage level of the pool is below an occupancy threshold, otherwise determining a priority level of the connection request and allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a pre-determined level.**

The Applicant respectfully submits that the references cited by the Examiner do not disclose the invention of independent claim 29. More specifically, neither Harris nor Coy et al. disclose the limitation of “allocating resources from the resource pool to satisfy the connection request if the usage level of the pool is below an occupancy threshold, otherwise determining a priority level of the connection request and allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a pre-determined level”.

Firstly, as mentioned above with respect to independent claim 1, Harris does not disclose “allocating resources from a resource pool as a function of...a pool occupancy threshold”. As such, the Applicant respectfully submits that Harris cannot disclose “allocating resources from the resource pool to satisfy the

connection request if the usage level of the pool is below an occupancy threshold". Stated more clearly, since Harris does not disclose "an occupancy threshold" Harris cannot disclose determining if the usage level of the pool is below such "an occupancy threshold". In addition, Harris does not disclose "determining a priority level of the connection request and allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a pre-determined level" when the usage level exceeds the occupancy threshold.

Furthermore, the Applicant respectfully submits that Coy et al. does not disclose this limitation either. More specifically, Coy et al. simply discloses that when the "minimum occupancy threshold" of a media instance is reached, the live objects on that archival medial instance get consolidated. Nowhere does Coy et al. disclose "determining the priority level" of a connection request if the usage level of the pool is above the "minimum occupancy threshold". As such, Coy et al. does not disclose the above-emphasized limitation of independent claim 29.

Since neither Harris, nor Coy et al. disclose all the limitations of independent claim 29, the Applicant respectfully submits that the combination of Harris and Coy et al., notwithstanding its aforementioned impermissibility, is not sufficient to establish a rejection based on obviousness. As such, the Examiner is respectfully requested to withdraw his rejection of independent claim 29.

If the Examiner finds the Applicant's arguments unconvincing, and continues to hold that Harris and Coy et al. disclose the present invention, the Examiner is respectfully invited to indicate why Harris and Coy et al. are considered analogous art, and where in Harris and Coy et al. each of the limitations of the independent claims are believed to be taught.

Claim 30

The Examiner's attention is respectfully directed towards the following limitation of independent claim 30.

Computer-readable media tangibly embodying a program of instructions executable by a resource manager to perform a method of processing a received request for a connection through a multi-service gateway, the method comprising:

determining a usage level of resources in a resource pool in the multi-service gateway; and

**allocating resources from the resource pool to satisfy the connection request if the usage level of the pool is below an occupancy threshold, otherwise determining a priority level of the connection request and allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a pre-determined level.**

The Applicant respectfully submits that the references cited by the Examiner do not disclose, teach or suggest the invention of independent claim 30. More specifically, for the same reasons as those set forth above with respect to independent claim 29, neither Harris nor Coy et al. disclose the above emphasized limitation. Accordingly, the Applicant respectfully submits that the combination of Harris and Coy et al. is not sufficient to establish a rejection based on obviousness. As such, the Examiner is respectfully requested to withdraw his rejection of independent claim 30.

Claim 31

The Examiner's attention is respectfully directed towards the following limitation of independent claim 31.

At least one computer programmed to execute a process for processing a received request for a connection through a multi-service gateway, the process comprising:

determining the usage level of a resource pool in the multi-service gateway; and

**if the usage level is below the pool occupancy threshold, allocating resources from the resource pool to satisfy the connection request;**

**if the usage level is not below the occupancy threshold, allocating resources from the pool to satisfy the connection request only if the priority level of the connection request is higher than a pre-determined level.**



The Applicant respectfully submits that the references cited by the Examiner do not disclose, teach or suggest the invention of independent claim 31. More specifically, for the same reasons as those set forth above with respect to independent claims 29 and 30, neither Harris nor Coy et al. disclose the above emphasized limitation. Accordingly, the Applicant respectfully submits that the combination of Harris and Coy et al. is not sufficient to establish a rejection based on obviousness. As such, the Examiner is respectfully requested to withdraw his rejection of independent claim 31.

iii) Rejection of Claim 10 under 35 USC §103

In the Office Action, the Examiner has rejected claim 10 under 35 USC §103(a) as being unpatentable over Harris in view of Coy et al. in further view of U.S. Patent Application 2001/0001000 (hereafter referred to as Thomas et al.).

For the reasons presented below, the Applicant respectfully traverses the Examiner's rejections, and submits that claim 10 is in allowable form.

Claim 10

Firstly, as mentioned above, the Applicant respectfully submits that Harris and Coy et al. relate to non-analogous art, and as such are not combinable in order to establish a rejection based on *prima facie* obviousness.

However, notwithstanding the impermissibility of this combination of references, the Applicant respectfully submits that the combination of Harris, Coy et al and Tomas et al. still does not satisfy a rejection based on *prima facie* obviousness. More specifically, Claim 10 is dependent on independent claim 1, and as such incorporates by reference all the limitations contained therein, including the limitation reproduced below, which has already been found to be absent from

both Harris and Coy et al. The Applicant further submits that this limitation is also absent from Thomas et al:

**“allocating processing resources from a resource pool as a function of: a usage level of the pool, a priority level of the connection request and a pool occupancy threshold.”**

The Thomas et al. reference relates to a pricing center for internet protocol routed transactions that enables a gateway operator to set preferences for completing an IP routed transaction. There is nothing in the Thomas et al. reference that discloses or suggests anything related to “allocating processing resources from a resource pool as a function of... a pool occupancy threshold.”

Since the combination of Harris, Coy et al. and Thomas et al. fail to disclose or suggest the above limitation of independent claim 1, and since claim 10 incorporates by reference all the limitations contained therein, the Applicant respectfully submits that this combination of these references fails to establish a *prima facie* case of obviousness as per §2142 of the MPEP. As such, the Examiner is respectfully requested to withdraw his rejection of dependent claim 10.

iv) Rejection of Claims 13-15, 17, 23-25 and 27 under 35 USC §103

In the Office Action, the Examiner has rejected claims 13-15, 17, 23-25 and 27 under 35 USC §103(a) as being unpatentable over Harris in view of Coy et al. in further view of U.S. Patent 6,026,086 (hereafter referred to as Lancelot et al.).

For the reasons presented below, the Applicant respectfully traverses the Examiner's rejections, and submits that claims 13-15, 17, 23-25 and 27 are in allowable form.

Firstly, as mentioned above, the Applicant respectfully submits that Harris and Coy et al. relate to non-analogous art, and as such are not combinable in order to establish a rejection based on *prima facie* obviousness.

However, notwithstanding the impermissibility of this combination of references, the Applicant respectfully submits that the combination of Harris, Coy et al. and Lancelot et al. still does not satisfy a rejection based on *prima facie* obviousness.

Claims 13-15, 17, 23-25 and 27

Claims 13-15 and 17 are dependent on independent claim 1, and as such incorporate by reference all the limitations contained therein, including the limitation reproduced below, which has already been found to be absent from both Harris and Coy et al. The Applicant further submits that this limitation is also absent from Lancelot et al:

**“allocating processing resources from a resource pool as a function of: a usage level of the pool, a priority level of the connection request and a pool occupancy threshold.”**

Although the Lancelot et al. reference relates to circuit switched networks and packet based networks, nowhere does Lancelot et al. disclose that processing resources in either of these networks are allocated as a function of “a pool occupancy threshold”. Instead, Lancelot et al. discloses a communications controller that is operative to interconvert a first protocol signal with a circuit switched network protocol signal and with a packet-based network protocol signal, in order to achieve a unified circuit-switched and packet-based communications system. There is nothing in Lancelot et al. to suggest allocating processing resources as a function of a pool occupancy threshold.

Since the combination of Harris, Coy et al. and Lancelot et al. fails to disclose, teach or suggest the above limitation of independent claim 1, and since claims

13-15 and 17 incorporate by reference all the limitations contained therein, the Applicant respectfully submits that the combination of these references fails to establish a *prima facie* case of obviousness. As such, the Examiner is respectfully requested to withdraw his rejection of dependent claims 13-15 and 17.

Claims 23-25 and 27

Claims 23-25 and 27 are dependent on independent claim 20, and as such incorporate by reference all the limitations contained therein, including the limitation reproduced below, which has already been found to be absent from both Harris and Coy et al.

**“allocating a subset of the PPSEs in the pool for satisfying the particular connection request, as a function of ... a pool occupancy threshold**

The Applicant further submits that this limitation is also absent from Lancelot et al. As mentioned above, Lancelot et al. does not disclose or suggest anything in relation to allocating resources as a function of a pool occupancy threshold. Accordingly, Lancelot et al. also does not disclose allocating a subset of the PPSEs as a function of a pool occupancy threshold.

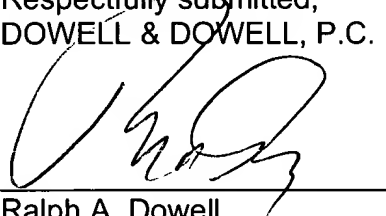
Since the combination of Harris, Coy et al. and Lancelot et al. fails to disclose the above limitation of independent claim 20, and since claims 23-25 and 27 incorporate by reference all the limitations contained therein, the Applicant respectfully submits that the combination of these references fails to establish a *prima facie* case of obviousness as per §2142 of the MPEP. As such, the Examiner is respectfully requested to withdraw his rejection of dependent claims 23-25 and 27.

**CONCLUSION**

In view of the above, it is respectfully submitted that all of claims 1-31 are in condition for allowance. Reconsideration of the rejections and objections is requested. Allowance of claims 1-31 at an early date is solicited.

If the claims of the application are not considered to be in full condition for allowance, for any reason, the Applicant respectfully requests the constructive assistance and suggestions of the Examiner in drafting one or more acceptable claims or in making constructive suggestions so that the application can be placed in allowable condition as soon as possible and without the need for further proceedings.

Respectfully submitted,  
DOWELL & DOWELL, P.C.



Ralph A. Dowell  
Reg. No. 26,868  
Agent for the Applicant

Date: 7/21/2005  
Dowell & Dowell, P.C.  
Suite 406  
2111 Eisenhower Avenue  
Alexandria, VA 22314  
USA  
Tel (703) 415-2555  
Fax (703) 415-2559